

***Response to Applicant's Remarks***

Applicant's response on July 29, 2009 filed in response to the Office Action dated January 29, 2009 has been received and duly noted.

In view of this response, the status of the rejections/objections of record is as follows:

***Status of the Claims***

Claims 1-3, 7-9 and 26-30 are pending and rejected.

Claims 4-6, 10-25, 31 and 32 have been cancelled.

Claim 33 has been withdrawn from examination as being directed towards a previously cancelled claimed. The instant invention, filed as a request for continued examination, was examined solely based upon a process (see amended claim set dated 12/15/05).

Additionally, in previous prosecution, the compound of claim 33 was rejected and rejected was overcome due to Applicant cancelling the claim (see Non-Final Office Action dated 1/29/09).

***Claim Rejections - 35 USC § 103***

Applicant's arguments with respect to 103(a) rejections have been fully considered and are not persuasive. The 103(a) rejection of claims 1-3, 7-9, 26-30 and 33 regarding obviousness over Leguzza et al (EP 0207696 A1) in view of Solomons et al (Organic Chemistry, 9<sup>th</sup> Edition, 2008) remains rejected.

First, Examiner would like to address Applicant arguments regarding the use of the Solomons reference not being prior art. It is well within the practice of the PTO to use post art references to show facts are accepted universally and used to provide evidence of the knowledge of a skilled artisan in the respective art. Examiner asserts that the Solomons reference was properly used in rejection.

Documents which do not qualify as prior art because they post-date the claimed invention may nevertheless be cited to show a universal fact, such as characteristics or properties of a material, or a specific scientific fact, or to show the level of ordinary skill in the art. (see MPEP 1843.01)

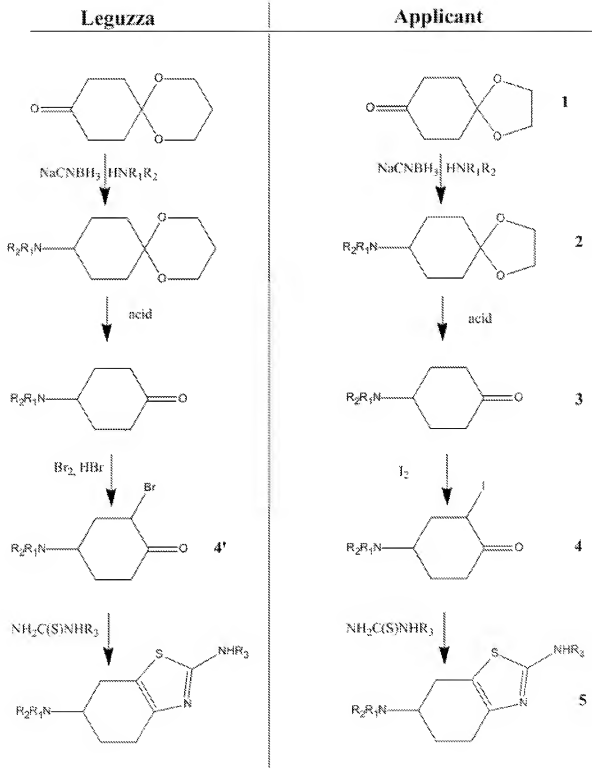
In general, the examiner should not use post-filing date references to demonstrate that the patent is non-enabling. Exceptions to this rule could occur if a later-dated reference provides evidence of what one skilled in the art would have known on or before the effective filing date of the patent application. *In re Hogan*, 559 F.2d 595, 605, 194 USPQ 527, 537 (CCPA 1977). (see MPEP 2164.05(a))

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

As outlined in the step-wise synthetic comparison in previous Non-Final Office and as shown below, the only major difference between the instant claimed invention

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and Leguzza is the formation of the haloketone intermediate: Leguzza's bromoketone versus Applicant's iodoketone.



An artisan of ordinary skill would be motivated to try different halogens (Group VII of the periodic chart) especially if the prior demonstrated use of one group, in this case a bromine, that resulted in low to moderated yields. A skill artisan in the laboratory would clearly be motivated to another halogen such as iodine which may provide more beneficial results. In response only to Applicant's argument, in Advanced Organic Chemistry 4<sup>th</sup> Ed. by Jerry March (see pages 587-590), it clearly states that ketones at the  $\alpha$ -position can be halogenated bromine, chlorine or iodine. Using another halogen that has not been previously used would be "Obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success. Examiner's motivation to deem a claimed invention to be obvious does not have to be the same as Applicant.

Applicant also argues that a skilled artisan would expect that the  $\alpha$ -iodoketone would be highly unstable relative the corresponding  $\alpha$ -bromoketone and that the  $\alpha$ -iodoketone intermediate could not be isolated. Examiner strongly asserts that these are all allegations. If one were to assume these statements to be true, a skilled artisan would not want to isolate the desired  $\alpha$ -iodoketone intermediate, but form this intermediate *in situ*. This would decrease synthetic steps, use less solvent and potentially increase yields amongst other economically and environmentally benefits.

In response to Applicant's allegations of the following:

Example used on page 8 of Applicant's Response regarding the Favorskii rearrangement shows several different pathways that may lead to side products. The Favorskii rearrangement is heavily dependent upon reaction conditions and can not be simply generalized as outlined by Applicant. Additionally, all  $\alpha$ -haloketones (chloro, bromo and iodo) can undergo the Favorskii rearrangement and are substrate, substituent and reaction condition dependent (see Jerry March, Advanced Organic Chemistry, 4<sup>th</sup> Edition, pages 1080-1083). Applicant's allegations are not persuasive.

Percent yields shown on page 9 of Applicant's response. Examine does not agree with % yield calculated – Leguzza having a lower yield of 27%. If one were to assume these statements to be true, a skilled artisan would be motivated to use a different halogen that would potentially give better results in view of the low yield as shown in the prior art.

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), stated that "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." KSR, 550 U.S. at \_\_\_, 82 USPQ2d at 1396. Exemplary rationales that may support a conclusion of obviousness include:

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) "Obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;
- (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. See MPEP § 2143 for a discussion of the rationales listed above along with examples illustrating how the cited rationales may be used to support a finding of obviousness. See also MPEP § 2144- §2144.09 for additional guidance regarding support for obviousness determinations.

The aforementioned reasons above describe rationales that support a conclusion of obviousness based upon the KSR International Co. v. Teleflex Inc. decision. Letters (A) - (E) rationale is supported above.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Conclusion***

Applicant is respectfully reminded that it is required that all claims be amended to elected group. Examiner also warns Applicant not to introduce new matter when amending.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.



Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Mabry, PhD whose telephone number is (571) 270-1967. The examiner can normally be reached on M-F from 9am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's primary examiner can be reached at (571) 272-0684, first, or the Examiner's supervisor, Janet Andres, PhD, can be reached at (571) 272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/John Mabry/  
Examiner  
Art Unit 1625

/Rita J. Desai/  
Primary Examiner, Art Unit 1625